

BEFORE THE  
PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA

State Universal Service Support of Basic	)	
Local Service Included in a Bundled	)	Docket No. 2009-326-C
Service Offering or Contract Offering	)	

**DIRECT TESTIMONY OF**  
**GLENN H. BROWN**  
**ON BEHALF OF THE**  
**SOUTH CAROLINA TELEPHONE COALITION**

**October 9, 2009**

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1    **I.     INTRODUCTION**

2    **Q.     Please state your name and business address.**

3    **A.**     My name is Glenn H. Brown, and my business address is PO Box 21173, Sedona,  
4             Arizona 86341.

5    **Q.     Please summarize your current employment and prior business experience.**

6    **A.**     I am President of McLean & Brown, a telecommunications consulting firm  
7             specializing in universal service and intercarrier compensation issues. Prior to  
8             joining McLean & Brown in 1998, I worked for U S WEST for 28 years, during  
9             which time I held a number of senior management positions in the regulatory and  
10            public policy area. I have testified before numerous state regulatory commissions,  
11            the Federal Communications Commission (FCC) and the United States Congress  
12            on a wide variety of telecommunications costing, pricing and regulatory issues.  
13            My last six years with U S WEST were spent in Washington, DC, where I was  
14            very involved in the implementation of the Telecommunications Act of 1996, with  
15            particular emphasis on universal service and access charge issues.

16   **Q.     Please summarize your educational experience.**

17   **A.**     I have a Bachelor of Science in Industrial Engineering from Lehigh University,  
18            and an MBA from the University of Colorado. Both of my degree programs  
19            focused on computer modeling technology and applications.

20   **Q.     Please describe your experience with universal service issues.**

21   **A.**     I have been active in almost every major universal service proceeding before the  
22            FCC since the passage of the 1996 Act. In 1998, the FCC appointed the Rural  
23            Task Force (RTF) to develop universal service policy recommendations for rural

1 telecommunications carriers. While not a member of the RTF, I attended almost  
2 all of its meetings, and assisted it in both analytical matters and in the preparation  
3 and drafting of several RTF white papers. In my current position I provide advice  
4 and assistance to small and mid-size telecommunications companies regarding  
5 universal service, intercarrier compensation and other regulatory and pricing  
6 issues before federal and state regulatory bodies.

7 **Q. Please describe your prior experience with access charges.**

8 A. In 1982, two years prior to the AT&T divestiture, I was appointed as U S WEST's  
9 representative to the eight-member AT&T committee that developed the original  
10 access tariff. During my tenure with U S WEST I managed organizations that  
11 were responsible for intercarrier compensation and access charge issues before  
12 state and federal regulatory bodies. From 1996 through 1998 I oversaw the  
13 implementation of the access charge and intercarrier compensation provisions of  
14 the Telecommunications Act of 1996 for U S WEST.

15 **Q. Have you previously testified before the Public Service Commission of South**  
16 **Carolina?**

17 A. Yes. I have appeared before the Commission several times on behalf of the South  
18 Carolina Telephone Coalition (SCTC) in matters related to universal service.

19 **Q. On whose behalf are you presenting testimony?**

20 A. I am presenting testimony on behalf of SCTC, including its member companies  
21 listed in Appendix A to my testimony.

22

1   **Q.    Could you briefly summarize your understanding of the issues in this**  
2       **proceeding?**

3    A.    Certain competitors<sup>1</sup> of SCTC members have requested the Commission to  
4       determine that Carriers of Last Resort (COLRs) that receive financial support from  
5       the South Carolina Universal Service Fund (SCUSF) should become ineligible for  
6       the receipt of such support when they offer competitive service bundles or  
7       contract services.

8   **Q.    Could you briefly summarize your conclusions on this issue?**

9    A.    Based upon my analysis of both Federal and South Carolina laws and past actions  
10       of the Federal Communications Commission (FCC) and the South Carolina Public  
11       Service Commission (SCPSC or Commission) to implement those laws, I have  
12       reached the following conclusions that I will be describing in the remainder of my  
13       testimony.

14       1. The offering of competitive service bundles or contract services should not  
15       restrict the ability of Carriers of Last Resort (COLRs) to receive high-cost  
16       funding that is intended to support the provision of affordable basic telephone  
17       service to consumers living in sparsely populated and high-cost areas of South  
18       Carolina.

19       2. The federal legislative and regulatory history of the Telecommunications Act  
20       of 1996 (1996 Act), has as its foundation the twin (and sometimes conflicting)

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<sup>1</sup> Based upon the filed position statements of parties, this position is being taken by the South Carolina Cable Television Association, CompSouth, TW Telecom of South Carolina LLC, NuVox Communications, Inc., and Sprint Communications Company, L.P.

objectives of promoting competition in the local telecommunications market, while at the same time ensuring the preservation of universal service.

3. The legislative and regulatory history in South Carolina regarding the implementation of the universal service provisions of the 1996 Act is consistent with these principles, and has established a framework that allows for robust competition while ensuring that all South Carolina consumers have access to affordable basic telephone service.

4. Competitive wireline carriers in the state of South Carolina serve primarily lower-cost customers living in or near cities, towns and other major population clusters, while COLRs are required to serve all customers in their service territory, including the higher-cost customers in rural and sparsely populated areas of the state that the SCUSF is intended to support.

5. Eliminating or restricting high-cost support to COLRs who offer service bundles or contracts would harm consumers in the higher-cost rural areas who rely on this funding to receive affordable basic telecommunications services.

6. Restricting or dis-incenting the ability of COLRs to offer service bundles or contracts would be anticompetitive, would deprive consumers of the benefits of competition, and would allow competitive carriers to charge higher prices.

7. Granting the request of certain parties to restrict or eliminate the ability of COLRs who offer service bundles to receive necessary SCUSF support would provide these parties with an unwarranted financial windfall at the expense of South Carolina consumers.

1    **II.    THE TELECOMMUNICATIONS ACT OF 1996**

2    **Q.    What are the major provisions of the 1996 Act related to the introduction of**  
3    **competition and preservation of universal service?**

4    **A.**    The primary purpose of the 1996 Act was to introduce competition into the  
5    market for local telecommunications services. Previously, the FCC had  
6    introduced competition into the markets for customer premises equipment and  
7    long distance services, but the provision of basic local telephone service had  
8    remained a regulated monopoly. Congress was smart enough to realize, however,  
9    that if the delivery of basic connectivity was left to the forces of the free  
10   marketplace, customers in the cities and towns where service could be provided  
11   profitably would be served, but remote customers who were more costly to serve  
12   than the revenues that they would generate would be excluded. Indeed, this is  
13   exactly what happened in the early days of the telephone industry, when the old  
14   Bell System wired the cities and towns, but bypassed many rural communities. It  
15   is also similar to how wireline competitors today are delivering competitive  
16   alternatives to consumers in cities and towns, but choosing not to serve the more  
17   remote areas of the state. The reason that most independent telephone companies  
18   exist today is that at some time in the past Bell chose not to serve these areas –  
19   precisely because they were costly to serve. It is for this reason that Congress  
20   included the second major purpose of the 1996 Act, the preservation of universal  
21   service. Thus the 1996 Act had two major purposes – the introduction of local  
22   competition and the preservation of universal service.

1   **Q.     How did the 1996 Act support the provision and maintenance of universal**  
2       **service?**

3   **A.     The 1996 Act supported the provision and maintenance of universal service in**  
4       **three specific ways:**

5       1.     Section 254(b)(3) of the Act establishes the principle that “Consumers in all  
6               regions of the Nation, including low income consumers and those in rural,  
7               insular and high cost areas, should have access to telecommunications  
8               services...that are reasonably comparable to those provided in urban areas...at  
9               reasonably comparable rates;”

10      2.     Section 254(b)(5) provides that “There should be specific, predictable and  
11              sufficient Federal and State mechanisms to preserve and advance universal  
12              service;” and

13      3.     Section 254(e) states that “Any such support should be explicit.” (emphasis  
14              added)

15   **Q.     What did Congress mean by support being “explicit?”**

16   **A.     Explicit support is open and above the board – what you see is what you get. This**  
17       **is in contrast to “implicit” support which is hidden in the rate structure, and**  
18       **overprices some services in order to underprice others. It is important to**  
19       **remember that the other primary purpose of the 1996 Act was to promote**  
20       **competition. If some services are burdened with the cost of supporting others,**  
21       **then the competitive market for the services providing the support becomes**  
22       **distorted. Consumers buy less of the overpriced service, and competitors are**  
23       **artificially attracted to this market, not necessarily because they provide a better**



1 service or provide it more economically, but rather because they are not burdened  
2 by the cost of the subsidy. By specifically removing implicit support and making  
3 it explicit, the Act was able to achieve both of its goals – affordable “universal”  
4 service for rural consumers, and vibrant competition in the market for all other  
5 services.

6 **Q. Can you provide an example of implicit support within the telephone**  
7 **industry?**

8 **A.** The best example of implicit support has been in the pricing of long distance  
9 services. Early in the last century, the pioneers of the telephone industry correctly  
10 recognized that the network became more valuable as each new customer was  
11 added. This goal was accomplished, in part, by pricing basic telephone service so  
12 low that the average working family could afford it, and making up shortfalls by  
13 overpricing long-distance service. I suspect that many of us with a little grey in  
14 our hair can remember a time when long distance services were thought to be very  
15 expensive, and a long distance call was regarded as something special, not lightly  
16 undertaken.

17 **Q. How has this subsidy of local service by long distance service been handled**  
18 **within the industry, and how has it changed in the aftermath of the 1996**  
19 **Act?**

20 **A.** Until the AT&T divestiture in 1984, this subsidy was handled internally in the  
21 telephone industry through a process called “Division of Revenues.” All  
22 telephone companies, from AT&T to the Bell Operating Companies and on down  
23 to the smallest independent rural telephone companies, pooled their long distance

1 revenues, and each carrier withdrew from this pool based upon its cost of  
2 providing service. The AT&T divestiture structurally separated the long distance  
3 operations that stayed with AT&T from the local network operations that went to  
4 the new Regional Bell Operating Companies (RBOCs, like the old BellSouth).  
5 The costs that had previously been recovered through the intra-industry pooling  
6 process were shifted to a new system of “Access Charges” that local telephone  
7 companies charged to the long distance companies (i.e., AT&T, MCI, Sprint, etc.)  
8 for the use of their networks to originate and terminate long distance calls.  
9 Interstate access charges were filed with the Federal Communications  
10 Commission (FCC) for calls that crossed state lines, and intrastate access charges  
11 were filed with the state commissions, such as the South Carolina Public Service  
12 Commission, for long distance calls that stayed within the state.

13 **Q. What happened to the support for local service that was previously**  
14 **recovered through the Division of Revenue process?**

15 A. Since the original access charges were designed to be revenue neutral, all of the  
16 support that had previously been recovered through the long distance pooling  
17 process moved into the new access charge regime. In other words, the support for  
18 high-cost rural areas remained implicit within the access charge regime.

19 **Q. How did regulators implement the requirements of the 1996 Act that implicit**  
20 **support be made explicit?**

21 A. The FCC and several of the state commissions (notably including the South  
22 Carolina PSC) initiated programs to remove implicit support from access charges  
23 and other services and replace it with explicit universal service funding. The

1 FCC's CALLS Order in 2000 and MAG Order in 2001<sup>2</sup> made specific reductions  
2 to remove implicit support from the interstate access rates of "non-rural" and  
3 "rural" telephone companies, respectively, and initiated new explicit federal  
4 universal service mechanisms. As will be discussed fully in the next section, in  
5 1996 the SCPSC established a state universal service fund to begin the process of  
6 removing implicit support from intrastate access charges and other intrastate  
7 services.

8 **Q. What impact has the removal of implicit support had on long distance**  
9 **services?**

10 A. Removal of local service subsidies from access charges helped to create and grow  
11 a robustly competitive market for long distance services. Consumers can now  
12 choose from a wide array of calling packages, some even offering unlimited local  
13 and long distance calling for a very attractive price, from a wide array of  
14 companies (e.g., wireless carriers, cable companies and telephone companies).  
15 Today's consumers barely give a thought about making a "long distance" call.  
16 The ultimate winner from all of this competition has been the consumer.

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<sup>2</sup> CALLS (Coalition for Affordable Local and Long Distance Services), Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, FCC 00-193, Released May 31, 2000. MAG (Multi-Association Group), Second Report and Order and Further Notice of Proposed Rulemaking in CC Docket 00-256, Fifteenth Report and Order in CC Docket No. 96-45, and Report and Order in CC Docket Nos. 98-77 and 98-166, FCC 01-344, Released November 8, 2001.

1    **III.    ACTIONS OF THE SOUTH CAROLINA LEGISLATURE AND PSC**

2    **Q.    Can you describe the initial activities that took place in South Carolina to**  
3    **implement the universal service provisions of the 1996 Act?**

4    A.    On May 29, 1996 (less than four months after the passage of the Federal Act), the  
5    South Carolina Governor signed into law Act No. 354. Among other things, this  
6    Act directed the Commission to initiate proceedings to define and establish a  
7    South Carolina Universal Service Fund, and to begin removing implicit support  
8    from intrastate rates. In one dramatic step, the Commission leveled access rates  
9    across the State of South Carolina, and began the process of removing implicit  
10   support for high-cost rural areas of the State that had previously been recovered  
11   through access charges into a sustainable explicit funding mechanism. I have  
12   analyzed access charges in many states across the country, and I am not aware of  
13   any state that moved more quickly or more decisively than South Carolina to  
14   remove implicit support from intrastate access rates.

15   **Q.    What was the next step in implementing explicit universal service funding in**  
16   **South Carolina?**

17   A.    Even after the leveling of intrastate access charges among carriers in 1996,  
18   significant amounts of implicit support for basic telephone service still remained  
19   in intrastate access rates. In 2001, the Commission implemented the South  
20   Carolina Universal Service Fund (SCUSF).<sup>3</sup> In the first phase of implementing  
21   the SCUSF, incumbent LECs made a reduction of approximately 50% in intrastate  
22   access charges, with this implicit support to be replaced with explicit funding

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<sup>3</sup> See Order No. 2001-419, issued June 6, 2001; and Order No. 2001-996, issued October 10, 2001, in Docket No. 1997-239-C..

1 from the SCUSF. This Order also established the concept that recipients of  
2 SCUSF funding must accept Carrier of Last Resort (COLR) obligations to provide  
3 defined basic local exchange service to any requesting customer location within  
4 its designated service location, at rates not more than the Commission-authorized  
5 maximum stand-alone rate. The enabling statute for the SCUSF provides that the  
6 ultimate size of this fund is defined as the sum of the difference, for each carrier  
7 of last resort, between its costs for providing basic local exchange services and the  
8 maximum amount that it may charge for the services.

9 **Q. Has the Legislature or Commission spoken previously on how the offering of**  
10 **service “bundles” would impact the receipt of SCUSF funding?**

11 A. Yes. Section 58-9-285(A)(1)(a) of the Commission’s rules defines a “bundled  
12 offering” as:

13 An offering of two or more products or services to customers at a  
14 single price ... at rates, terms, or conditions that are different than if the  
15 services are purchased separately from the LEC’s tariffed offerings.

16  
17 These rules also require that the LEC offering such bundles have “a tariffed flat-  
18 rated local exchange service offering for residential customers and for single-line  
19 business customers that provides access to the services and functionalities set  
20 forth in 58-9-10(9)” [the services that define “basic local exchange service].  
21 Section 58-9-285(C) of the bundling statute specifically provides that nothing in  
22 the statute was intended to affect the Commission’s jurisdiction with respect to  
23 distributions from the State USF. In addition, the South Carolina Legislature  
24 recently passed H. 3299, the “Customer Choice and Technology Investment Act

1 of 2009.” This law created a new form of alternative price regulation and states  
2 definitively and unambiguously:

3 C(11) For those LECs that have not elected to operate under this  
4 section, nothing contained in this section or any subsection shall affect  
5 the current administration of the state USF nor does any provision  
6 thereof constitute a determination or suggestion that only stand-alone  
7 basic residential lines should be entitled to support from the state USF.  
8

9 Taken together, these words indicate to me that neither the Legislature nor the  
10 Commission had any intention that the offering of competitive service bundles  
11 would impact the receipt of necessary support under the SCUSF.

12 **Q. Are there other reasons why the Commission should find that the offering of**  
13 **service bundles should not impact the receipt of SCUSF funding?**

14 A. Yes. Explicit USF funding was specifically designed to replace support necessary  
15 for the provision of affordable basic telephone service to consumers in rural,  
16 insular and high-cost regions of South Carolina. The cost of providing telephone  
17 service varies greatly among customers, and without continued access to this  
18 support, customers living in the highest-cost areas would experience significant  
19 harm.

20 **IV. THE COST OF PROVIDING BASIC TELEPHONE SERVICE VARIES**  
21 **GREATLY AMONG CUSTOMERS**

22  
23 **Q. Why do customers cost different amounts to serve?**

24 A. The cost of providing telephone service can vary greatly depending on factors  
25 such as how far the customer lives from the serving central office, and the  
26 subscriber density of the neighborhood in which they live. Customers living close  
27 to the central office in densely populated areas can be served very economically,

1 often at costs of \$20 per month or less, while customers living long distances from  
2 the central office in sparsely populated rural areas can cost hundreds of dollars per  
3 month to serve, or more.

4 **Q. Have studies been done to quantify the relative impact of distance and**  
5 **customer density on the cost of providing basic telephone service?**

6 A. Yes. In the late 1990s the FCC instituted a series of workshops to examine the  
7 development of proxy cost models for calculating, among other things, the amount  
8 of high-cost universal service support that large “non-rural” telephone companies,  
9 like BellSouth, would require to meet the “specific, predictable and sufficient”  
10 standards for universal service under the 1996 Act. One of these models, the  
11 Benchmark Cost Proxy Model (BCPM), was adopted by the South Carolina PSC  
12 for the determination of State USF support for large “non-rural” carriers such as  
13 BellSouth (now know as AT&T).

14 **Q. Do you have any familiarity with the BCPM model?**

15 A. Yes. The BCPM was developed through a collaborative effort of BellSouth,  
16 Sprint and my former employer, U S WEST (now known as Qwest). I was a  
17 leader of this team, and I am very familiar with the BCPM model.

18 **Q. How can the results of the BCPM model be useful in analyzing the issues that**  
19 **the Commission must consider in this proceeding?**

20 A. Exhibit GHB-1 to my testimony shows the statewide average costs across all  
21 South Carolina ILECs for serving customers in each of the nine customer density  
22 bands defined by the BCPM. This data shows that average monthly cost range  
23 from \$17.81 per line per month in areas with subscriber density of 10,000

1 households per square mile, to \$114.97 per line per month in areas with less than  
2 five households per square mile. This exhibit shows that costs tend to increase  
3 gradually with declining population density until about 100 households per square  
4 mile. Below 100 households per square mile, costs tend to increase geometrically  
5 as customer density decreases further.

6 **Q. What conclusions do you draw from the cost relationships illustrated on**  
7 **Exhibit GHB-1 that are relevant to the Commission's examination of**  
8 **whether the offering of service bundles or contracts should affect a COLR's**  
9 **receipt of SCUSF support?**

10 A. The purpose of universal service funding is to ensure that consumers living in  
11 high-cost areas have services reasonably comparable to those available in urban  
12 areas, at reasonably comparable rates. The data presented in GHB-1 clearly shows  
13 that any such funding that a company may receive is not intended to support  
14 subscribers living in densely populated areas close to the central office, but rather  
15 is provided for the benefit of delivering affordable basic telephone service to the  
16 more costly customers located in sparsely populated areas and at great distances  
17 from the central office. In other words, the customers living in cities and towns  
18 neither need nor receive SCUSF support.

19



1 **V. SCTC MEMBERS AND THEIR WIRELINE COMPETITORS HAVE**  
2 **VERY DIFFERENT BUSINESS MODELS AND SERVE VERY**  
3 **DIFFERENT CUSTOMER PROFILES**  
4

5 **Q. How do the customer profiles and business models of the SCTC member**  
6 **companies differ from those of their wireline competitors?**

7 A. As COLRs, SCTC members have accepted the obligation of providing affordable  
8 basic telephone service to all customers in their service territory, no matter where  
9 they live, and no matter how costly they may be to serve. Their competitors,  
10 however, have no such obligations and are free to pick and choose the particular  
11 areas and customers that they wish to serve. Not surprisingly, they have chosen to  
12 serve the more densely populated areas where their costs are the lowest, and their  
13 ability to make a profit is highest.

14 **Q. Is this necessarily a bad thing?**

15 A. No, it is not. It actually makes a lot of sense for a competitor without universal  
16 service obligations to seek to maximize its profitability. What would be a bad  
17 thing would be if carriers that did not have a COLR obligation sought to receive  
18 the same high-cost support as COLRs that did. Equally bad, and what is at issue  
19 in this case, would be if such competitors sought to block COLRs from receiving  
20 the universal service support needed to serve the higher-cost customers simply  
21 because the COLR chose to offer service bundles or contracts.

22 **Q. Can you provide an example of the different service territories of SCTC**  
23 **members and their cable competitors.**

24 A. Yes. My colleague, Mr. Keith Oliver of Home Telephone Company (Home), has  
25 also filed testimony on behalf of the SCTC in this proceeding. Within the Home

1 serving area Time Warner Cable (TWC) offers telephone service to a subset of  
2 Home's customers. I have computed the subscriber density for Home's and  
3 TWC's service area using population statistics from the Bureau of the Census.  
4 The results are as follows:

<u>Company</u>	<u>Average Subscriber Density</u>
Home	21.9 households per square mile
TWC	171.5 households per square mile

8 In addition, 47% of Home's customers are located in Census Blocks with  
9 subscriber density of less than 100 households per square mile (the most costly  
10 customer group), while 91% of TWC's customers are located in Census Blocks  
11 with subscriber density of over 100 households per square mile (the least costly  
12 customer group).

13 **VI. AVERAGES CAN BE MISLEADING – PARTICULARLY WITH**  
14 **REGARD TO UNIVERSAL SERVICE SUPPORT**

15  
16 **Q. Why are averages often misleading?**

17 A. Averages alone, without a more thorough understanding of the makeup of the  
18 entire universe, can sometimes lead to erroneous conclusions, often with serious  
19 unintended consequences. For example, just because a river has an average depth  
20 of two feet does not mean that a person can safely walk across it. There may be  
21 large parts of its width that are shallow, and still be a deep channel where a person  
22 could drown.

23 **Q. How can averages be misleading in the analysis of universal service support?**

24 A. Let's take a hypothetical example of a company that serves 10,000 lines and  
25 receives \$100,000 per month of universal service support. While it is

1 mathematically possible to divide the total amount of support by the total number  
2 of lines and get an average of \$10 per line per month of support, this in no way  
3 means that each and every line gets \$10 per month of support, or that each and  
4 every line needs \$10 per line per month of support. A more plausible scenario,  
5 given the cost relationships shown on Exhibit GHB-1, might be that 9,000 of the  
6 lines are located in a densely populated town and need no support, while 1,000  
7 lines are located in the surrounding countryside and require an average of \$100  
8 per month each in high-cost universal service support.

9 **Q. Can you provide a visual example of this phenomenon?**

10 A. Exhibit GHB-2 provides a graphical illustration of what I call the “Donut Theory”  
11 of universal service support. It is typical in most communities in the United  
12 States for a sizeable portion of the population to live in close proximity in towns,  
13 and for the remaining population to live in a more dispersed fashion in the areas  
14 between the towns. The engineers who designed the modern telephone network  
15 generally put the central switching offices in the center of town, where the most  
16 people can be connected to the network with the least amount of wire. (These  
17 central offices are sometimes called “wire centers.”) From the town, “feeder  
18 trunks” would radiate out into the countryside, usually along major highways or  
19 roads. “Sub feeder trunks” would branch off of the feeder trunks to reach small  
20 clusters of customers in the less populated parts of the serving area. Exhibit  
21 GHB-2 shows a typical rural South Carolina town, with the city limits enclosing  
22 the densely populated area, with the central office located in the center of town.

23

1    **Q.     Why do you refer to this as the “Donut Theory” of universal service support?**

2    A.     Think of the town as the center or “Hole” of the donut. This is the area where  
3           population density is high, costs are low, and no universal service support is  
4           needed to ensure that consumers are able to get affordable telephone service (often  
5           from multiple competing providers). The surrounding countryside is the “Donut,”  
6           where population density is significantly lower, costs are much higher, and  
7           universal service support is often needed to provide these higher-cost customers  
8           with services reasonably comparable to urban customers, at reasonably  
9           comparable prices. Thus, no universal service funding is necessary to serve  
10          customers in the hole, and any universal service funding that the carrier may  
11          qualify for is needed to serve customers located out in the donut. In my prior  
12          hypothetical example, no support would be required in the hole, and \$100 per line  
13          per month, on average, would be required to serve consumers living in the donut.

14   **Q.     Has the need to examine the universal service funding requirements in**  
15       **different sub-sections of a telephone company’s serving area been recognized**  
16       **by policy makers?**

17   A.     Yes. Between 1998 and 2000, the Rural Task Force worked to develop plans to  
18           implement the universal service provisions of the 1996 Act for rural telephone  
19           companies. One of their recommendations was to allow companies to  
20           “disaggregate” universal service support into two or more zones within a wire  
21           center.<sup>4</sup> The FCC adopted this provision in its rural universal service Order,<sup>5</sup> and

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<sup>4</sup> Rural Task Force Recommendation to the Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Released September 29, 2000, at page 33.

1 provided a one-time opportunity in 2002 for local telephone companies to file  
2 cost-based universal service disaggregation plans. My company performed  
3 disaggregation studies for over 100 rural study areas, and my colleagues and I  
4 invented the term “Donut Theory” to help explain the cost differences and the  
5 rationale for the disaggregation concept to company personnel and regulators.<sup>6</sup>

6 **Q. How does the Donut Theory relate to competition and universal service?**

7 A. For reasons discussed previously, competitors tend to locate in the “hole,” where  
8 USF is not needed. This is the “low-hanging-fruit” where entry costs are lower  
9 and profit potential is higher. Since competitors do not have the same obligation  
10 to serve as COLRs, there is no incentive to build out into the “donut” where any  
11 customer that the competitor might win would most likely be a money losing  
12 proposition.

13 **VII. REMOVING OR RESTRICTING NECESSARY UNIVERSAL SERVICE**  
14 **SUPPORT WHEN A COLR OFFERS SERVICE BUNDLES OR**  
15 **CONTRACTS WOULD HARM CONSUMERS, BOTH RURAL AND**  
16 **URBAN, AND WOULD PRODUCE RESULTS CONTRARY TO THE**  
17 **PUBLIC INTEREST**

18  
19 **Q. How would removing or restricting universal service support when a COLR**  
20 **offers service bundles harm rural consumers?**

21 A. Simply put, it would remove some or all of the resources necessary to serve  
22 customers living in the higher-cost regions of the COLR’s service territory. The  
23 degree of harm would depend on the manner in which support were removed from

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<sup>5</sup> Fourteenth Report & Order and Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket 96-45, and Report and Order in CC Docket No. 00-256, FCC 01-157, Released May 23, 2001, at paragraphs 136-143.

<sup>6</sup> See also *A Compilation of “Best Practices” to Implement the Telecommunications Act of 1996*, National Regulatory Research Institute, April, 1999, at page 36 (“No Support” Zones)

1 the COLR-bundler. If the mere offering of a service bundle made the COLR  
2 ineligible for any universal service support, then all of the support would go away,  
3 and the COLR would be absolutely unable to serve the remote areas, or would  
4 need to radically increase prices to the more costly customers, neither of which  
5 would be in the public interest. Remember, a COLR gets support only upon the  
6 demonstration of its actual costs of serving the high-cost area. Even if the COLR  
7 were only “relieved” of the average per-line support for the lines that the  
8 competitive provider “won,” or for the bundled or contract lines that the COLR  
9 “sold,” the results would be similarly financially devastating. In the simple  
10 hypothetical case that we have been using, if the competitor won 20% (or if the  
11 COLR sold bundles to 20%) of the 9,000 lines in town, and the COLR were  
12 relieved of \$10 in “average” support for each of these lines, the COLR would be  
13 short \$18,000 of the support that it demonstrably needs to serve the more sparsely  
14 populated parts of its service area.

15 **Q. Continuing with your example, some competitors have complained that it is**  
16 **unfair to have to compete with a COLR that gets \$10 per line in support for**  
17 **each of its customers. How do you respond to this?**

18 A. The argument is completely bogus. It misapplies averages. The COLR receives  
19 support only because of the actual cost of serving the high-cost customers that the  
20 competitor has chosen not to serve. If the COLR did not serve any high-cost  
21 customers then it would not receive any high-cost support either. Universal  
22 service funding in no way disrupts or alters the competitive dynamic for  
23 customers in the lower-cost areas of the COLR’s service territory.

1   **Q.    How would removing or restricting the receipt of universal service support**  
2       **upon the offering of service bundles impact the incentives and behavior of**  
3       **COLRs?**

4    A.    Removing or restricting the ability of a COLR to receive necessary high-cost  
5       universal service support would be very disruptive, and would put these carriers  
6       between a rock and a hard place. They would be left with the following  
7       unattractive alternatives:

- 8       •    If they offer bundled services to remain competitive, they forfeit the financial  
9       resources that they need to meet their COLR obligations;
- 10      •    If they choose to not offer bundles in order to retain the necessary funding,  
11      they forego an opportunity to legitimately compete for customers against  
12      competitors who can and do offer service bundles; and
- 13      •    Even if they lose a customer to a competitor they still must maintain the basic  
14      service offering and the capability to serve should that customer decide to  
15      come back.

16   **Q.    How would removing or restricting universal service support when a COLR**  
17       **offers service bundles harm the more urban consumers?**

18   A.    Because of the important COLR commitments that they have made to rural  
19       consumers, and their proven need for explicit universal service support to serve  
20       them, rural South Carolina telephone companies could well conclude, reluctantly,  
21       that they should not offer service bundles. Doing this would harm urban  
22       consumers in two ways. First, they would be deprived of legitimate competitive  
23       service offerings from the incumbent telephone company. Second, with a

1 potential competitor now removed from the market for bundled service offerings,  
2 the competitive carrier would be able to charge a higher price for the service  
3 bundles that they offer. This would be anti-competitive, and would stand the pro-  
4 competitive goals of the 1996 Act and the South Carolina Legislature totally on  
5 their head.

6 **Q. Who would be the winners and losers if COLRs are prevented from**  
7 **receiving universal service funds if they offer competitive service bundles?**

8 A. The winners would be the competitive service providers who would receive an  
9 unwarranted financial windfall from keeping a potential competitor out of the  
10 market for bundled telecommunications services. South Carolina consumers  
11 would stand to lose two ways, either through the loss of affordable services in  
12 high-cost areas, or through the loss of a potential competitor for bundled  
13 telecommunications products.

14 **CONCLUSION**

15 **Q. Could you please summarize your testimony?**

16 A. The Telecommunications Act of 1996 established the twin objectives of the  
17 introduction of local competition and the preservation of universal service. The  
18 proposal to eliminate or restrict universal service support when a COLR chooses  
19 to offer service bundles fails on both of these counts. It would eliminate or  
20 restrict support that is necessary to deliver affordable basic service to remote and  
21 high-cost areas – failing the universal service test. It would deprive customers of  
22 legitimate competitive service offerings by COLRs – failing the local competition



1           test. For these reasons, the Commission should reject the proposal since it would  
2           not serve the public interest.

3    **Q.    Does this conclude your testimony at this time?**

4    **A.    Yes.**

## **Appendix A**

### **South Carolina Telephone Coalition Member Companies**

Bluffton Telephone Company, Inc.

Chesnee Telephone Company

Chester Telephone Company, d/b/a TruVista Communications

Farmers Telephone Cooperative, Inc.

Ft. Mill Telephone Company, d/b/a Comporium Communications

Hargray Telephone Company, Inc.

Home Telephone Company, Inc.

Horry Telephone Cooperative, Inc.

Lancaster Telephone Company, d/b/a Comporium Communications

Lockhart Telephone Company, d/b/a TruVista Communications

McClellanville Telephone Company

Norway Telephone Company

Palmetto Rural Telephone Cooperative, Inc.

Piedmont Rural Telephone Cooperative, Inc.

PBT Telecom

Ridgeway Telephone Company, d/b/a TruVista Communications

Rock Hill Telephone Company, d/b/a Comporium Communications

Sandhill Telephone Cooperative, Inc.

St. Stephen Telephone Company

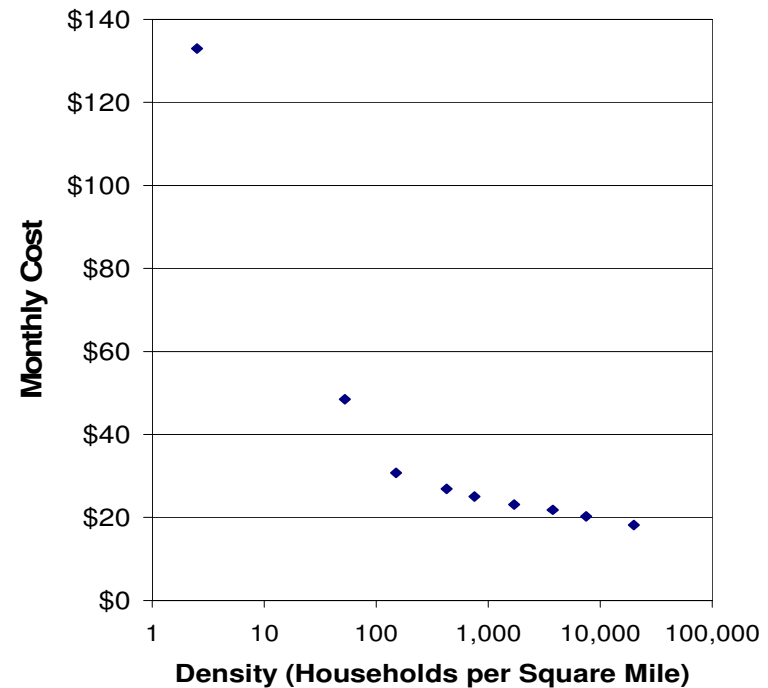
West Carolina Rural Telephone Cooperative, Inc.

Williston Telephone Company

# Exhibit GHB-1

## SC Average Cost vs. Density

Households per Square Mile	South Carolina Average Cost
0 to 5	\$114.97
5 to 100	\$48.24
100 to 200	\$31.66
200 to 650	\$28.07
650 to 850	\$26.34
850 to 2550	\$23.85
2550 to 5000	\$21.62
5000 to 10,000	\$19.45
> 10,000	\$17.81



# Exhibit GHB-2

## The “Donut Theory” of USF

